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## ON THE IDENTITY OF *MELINAEA LUCIFER* BATES, WITH DESCRIPTIONS OF TWO NEW *MELINAEA* SUBSPECIES (LEPIDOPTERA: ITHOMIINAE)

BY RICHARD M. FOX<sup>1</sup>

Dr. Harvey Bassler of The American Museum of Natural History collected a single male *Melinaea* which has puzzled me and which I have been unable to identify. At the suggestion of Dr. Wm. T. M. Forbes I wrote Mr. N. D. Riley of the British Museum (Natural History), enclosing a photograph of the insect with the request that it be compared with the types of two Godman and Salvin species, the brief unfigured descriptions of which seemed fairly close. In due course Mr. Riley replied, and I quote from his letter: "I have now had an opportunity of comparing the photograph with the types of *Melinaea macaria* and *M. egesta*. It does not agree nearly so well with either of these as with the type of *M. lucifer* of Bates. As photographs are so much better of these things than descriptions I have asked Mr. Tams to photograph all three types for you, and these I will send on to you as soon as they are available. It would seem to me that your insect is a slight variant of *lucifer*, having rather more extensive yellow areas in the fore wing. The fore tibia and tarsus of these three species are longer than in *M. comma*, being of the length normal to the genus."

Upon receiving the photographs I was surprised to find that *Melinaea lucifer* Bates has been misidentified generally, and that the form which has passed as *lucifer* has not been named.

I myself have not seen specimens agreeing with the photographs of the types of the other two species. Judging only by the pictures, however, I would guess that both *M. macaria* Godman and Salvin<sup>2</sup> and *M. egesta* Godman and Salvin<sup>2</sup> are

forms of *M. menophilus* Hewitson;<sup>3</sup> *egesta* seems close to *M. flavosignata* Staudinger,<sup>4</sup> but the apical spots are stronger and the postmedian yellow band considerably wider; *macaria* is close to *menophilus* on the fore wing, with the addition of an apical band of yellow, but the hind wing has the bands merged into a large black splotch.<sup>5</sup>

The photograph of the type of *Melinaea lucifer* is reproduced here (Fig. 1). The label data read in part, "S. Paulo, U. Amazons, H. W. Bates," "M. lucifer Bates, type, Bates, Tr. L. S. XXIII," "B. M. Type No. Rh. 7009." The specimen is a female.

The Bassler specimen appears to be, as Mr. Riley suggests, a form of *lucifer*. There seem to me to be sufficient pattern differences to warrant its being described as a new subspecies. Sao Paulo (Amazonas, Brazil) and the upper Rio Marañon are in zoogeographically distinct regions, and one would expect most Ithomiinae found in both districts to show subspecific variation between them.

### *Melinaea lucifer lutzii*, new subspecies

Figure 2

In *lucifer lucifer* the yellow of the fore wing is confined to the subapical band and the postmedian fascia, and in the latter area there is some tawny scaling, especially around the

<sup>1</sup> Hewitson, 1855, Exot. Butt., I, Pl. "Mechanitis I," fig. 2 (not fig. 3).

<sup>2</sup> Staudinger, 1888, Exot. Schmett., I, p. 71. Haensch, 1909, in Seitz, cites *egesta* as a synonym for *flavosignata*; of the latter I have no authoritative material but have determined as such a male in the Reading Museum collection. This male may be something else, or it may be that the postmedian yellow fascia varies in width. In any event, the Reading Museum male does not agree with the photograph of the type of *egesta*.

<sup>3</sup> In a recent letter Dr. Forbes informed me that there is a female in the Fassel Collection at Cornell University which is *macaria*; the specimen is without data.

<sup>1</sup> Reading (Pennsylvania) Public Museum.

<sup>2</sup> Godman and Salvin, 1898, Trans. Ent. Soc. London, p. 107.

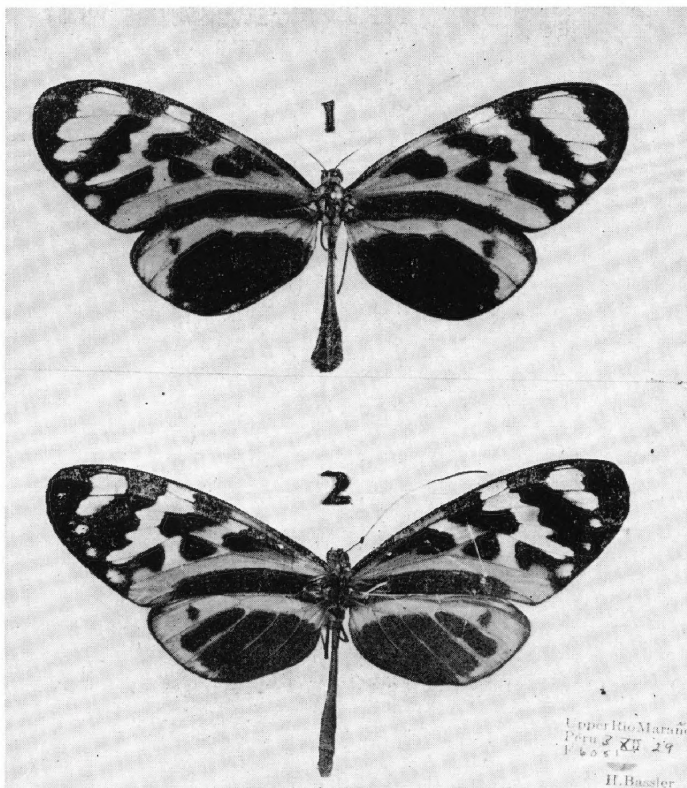


Fig. 1. *Melinaea lucifer lucifer* Bates, type, female. Photographed by Mr. Tams, British Museum (Natural History), natural size.

Fig. 2. *Melinaea lucifer lutzi*, new subspecies, holotype, male. Photographed natural size.

end of the discocellular band; in *lucifer lutzi* yellow invades the basal half of the wing, for not only is the postmedian fascia completely yellow, but there is yellow scaling in the light spot in the end of the cell and in the light spot in  $Cu_1-Cu_2$ . The light submarginal spot  $Cu_1-Cu_2$  (which is found also in *M. comma* Forbes<sup>1</sup>) is tawny in *lucifer*, yellow centered in *lutzi*; the submarginal spot  $M_3-Cu_1$  is tawny in *lucifer*; in *lutzi*, yellow with slight tawny scaling around its circumference. The subapical fascia, which in *lucifer* is broad and reaches nearly to  $M_3$ , is reduced in *lutzi*, the main part of it ending at  $M_2$ , while the element  $M_2-M_3$  is reduced to a small round yellow spot. On the hind wing the veins in the black patch are also black in *lucifer*, while in *lutzi*  $M_3$  is tawny, cutting off an oblong bar above it, and  $Cu_1$  and  $Cu_2$  are tawny below the cell. Beneath, the fore wing of *lutzi* is as above; the hind wing has a black bar from the base across the top of the cell and anterior of  $Sc$ , reaching nearly to the wing apex; the costal margin is tawny, humeral lobe yellow.

The venation of *lutzi* is typical of *Melinaea*, but the arms of the humeral vein are shorter than usual. The proximal hair pencil is very small, consisting of only a few hairs, while the distal pencil is proportionately longer.

Genitalia characteristic of *Melinaea*.

The fore legs are asymmetric, a remarkable character which probably is an individual monstrosity rather than a feature of the species.<sup>2</sup> Right fore leg with tibia seven-eighths, the tarsus five-eighths, of the length of the femur, both slender; tarsus two-segmented, the terminal segment about one-third the length of the proximal segment. Left fore leg with tibia and tarsus about equal in length, both a little less than half the length of the femur; tibia thickened, suboval; tarsus slender, two-segmented, the terminal segment three-fifths of the length of the proximal segment.

Antennae yellow, black at the base and extreme apex; collar and patagia tawny; legs

<sup>1</sup> Forbes, 1927, Jour. N. Y. Ent. Soc., XXXV, pp. 34-35, Pl. II.

<sup>2</sup> Dr. Forbes states, also in a recent letter to me, "The type of my new *Dircenna* also shows it, though I did not think it worth mention, and I judge it may turn out common in these intermediate genera where the fore leg is in the active stage of reduction."

yellow scaled; abdomen olive brown above, yellowish beneath.

**HOLOTYPE**.—Male, upper Rio Marañon, Peru, December 3, 1929 (H. Bassler), genitalia slide No. 390, type No. 28709, in The American Museum of Natural History.

Named for Dr. Frank E. Lutz.

It seems to me improbable, though possible, that *lucifer* and *lutzi* are merely intrapopulational variations; more material of this apparently rare species is needed to settle the point.

As to the form heretofore misidentified as *M. lucifer* Bates, I have not been able to find in literature a suitable name, and accordingly describe it here, naming it for Mr. N. D. Riley, through whose kindness the situation came to my attention.

**Melinaea marsaeus rileyi**, new subspecies

*Melinaea lucifer* STAUDINGER, 1888, Exot. Schmett., I, p. 71, Pl. xxx.—HAENSCH, 1909, in Seitz, Gross. der Erde, V, p. 122, Pl. xxxiiia. —FORBES, 1927, Jour. N. Y. Ent. Soc., XXXV, pp. 24, 32

The figure in Seitz (Pl. xxxiiia) cited as *M. lucifer* agrees very well, in main, with the specimens at hand. In a few males the comma-mark is hollowed, giving the effect of a hook but preserving the broadly circular outline; the exact extent of yellow in the postmedial fascia varies a little but always is present; the apical band is quite uniform in specimens examined, though in the Staudinger figure the element below  $M_2$  is reduced. The under

sides of the wings deviate but little from the upper sides; on the hind wing a broad black band runs from the base nearly to the wing apex over the anterior part of the cell and over Sc (present above on the female, of course); in most specimens this band reaches about four-fifths of the distance to the apex; following it is an extension of the tawny ground, sometimes reduced with the black bar longer, and there is a squarish black spot, usually isolated, over the terminus of Sc and R; the costal margin itself is tawny; there is some yellow scaling in the tawny humeral lobe. Antennae yellow, black at the base, brownish at the extreme tip; legs yellow scaled; thorax above and collar tawny; abdomen black-brown above and below, the last few segments with a yellow-green or fuscous light spot. Male fore legs symmetric; tibia and tarsus equal, each seven-eighths of the length of the femur, slender.

**TYPE MATERIAL**.—Holotype, male, upper Rio Marañon, Peru, September 7, 1930 (H. Bassler), type No. 28710, in The American Museum of Natural History. Allotype, female, Rio Juruá, Brazil-Peru (W. Ames), in The American Museum of Natural History. Paratypes: male and female, upper Rio Marañon, Peru (H. Bassler), in the Academy of Natural Sciences of Philadelphia; two males, Balzapuerto, Rio Paranapura, Peru (Klug), and one male, Iquitos, Peru (Klug), in the Reading Museum; one male, Amazonas (determined by Staudinger and Bang-Haas as *divisa*), in Cornell University; and one female, no data, in the Fassl Collection in Cornell University.

